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| 10/664,237      | 09/17/2003  | Yukihiro Matsumoto   | 4296-169 US         | 3714             |

7590 07/11/2006

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| EXAMINER |
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ZUCKER, PAUL A

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

1621

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/664,237

Applicant(s)

MATSUMOTO ET AL.

Examiner

Paul A. Zucker

Art Unit

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/10/2003</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Specification***

1. The abstract of the disclosure is objected to because the phrase 'the productions each other' in the last sentence does not make sense. Correction is required. See MPEP § 608.01(b).
2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 recites the limitation "(salt)" in line 2. The parenthetical expression "(salt)" renders the claim indefinite because it is unclear whether the limitation enclosed within the parentheses is part of the claimed invention. See MPEP § 2173.05(d). Claim 5 and its dependents are therefore rendered indefinite.

### ***Claim Rejections - 35 USC § 102***

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Fauconet et al (US 5,734,075 03-1998). Fauconet discloses (Column 4, lines 33-65, see also claim 7) a process for the recovery of the light-noble products present in the combined distillation residues from the processes for the manufacture of acrylic acid and its esters. Fauconet generically discloses (Column 4, lines 63-65) the use of conventional removal treatment of the residual oils.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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5. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fauconet et al in view of Sada et al (US 4,618,709 10-1986).

Instantly claimed is a method for the disposal of waste material, which comprises purifying at least one waste material selected from the group consisting of waste oil, waste water, and waste gas emitted from a process for production of acrylic acid and at least one waste material selected from the group consisting of waste oil, waste water, and waste gas emitted from a process for production of an acrylic ester jointly. The waste oil, waste water, and waste gas or combinations thereof are subjected to combustion, wet oxidation and/or treatment with activated sludge.

Fauconet teaches (Column 4, lines 33-65, see also claim 7) a process for the recovery of the light-noble products present in the combined distillation residues from the processes for the manufacture of acrylic acid and its esters. Fauconet teaches (Column 4, lines 52-58) recycle of waste water back to the process for acrylic ester formation. Fauconet generically teaches (Column 4, lines 63-65) the use of conventional removal treatment of the residual oils.

The difference between the process instantly claimed and that taught by Faconet is that Fauconet does not specify the method of disposal of waste oil, waste water, and waste gas or combinations thereof while the use of combustion, wet oxidation and/or treatment with activated sludge is instantly employed.

Sada, however, teaches (Abstract, lines 1-25) a process for the separation of methacrylic acid from a methacrylic acid –containing gaseous reaction mixture by producing a condensed liquor from which waste water is evaporated and the evaporate subjected to catalytic combustion. Sada teaches (Column 8, lines 5-16) the catalytic combustion of evaporated waste-water and combustion of the resulting waste oil (containing some of the residual waste water) in a furnace. Sada teaches (Column 5, lines 42-53) the combustion of the evaporated waste water and the treatment of the remaining waste oil (presumably containing residual waste water) by a wet oxidation process.

Thus one of ordinary skill in the art, attempting to carry out the process of Fauconet, would have been motivated to employ Sada's process for waste disposal since Fauconet provides no specific guidance for the methods of waste disposal. There would have been a reasonable expectation for success since both Fauconet's and Sada's process are directed toward the production of acrylic compounds.

Thus the instantly claimed process would have been obvious to one of ordinary skill in the art.

### ***Claim Objections***

6. Claim 5 is objected to because of the following informalities: The word "polyacrylic" in line 2 is misspelled. Appropriate correction is required.


### ***Conclusion***

7. Claims 1-8 are pending. Claims 1-8 are rejected. Claim 5 is objected to.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A. Zucker whose telephone number is 571-272-0650. The examiner can normally be reached on Monday-Friday 5:30-2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



PAUL A. ZUCKER, PH.D.  
PRIMARY EXAMINER

